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August 10, 2015

Cal Joyner, Regional Forester
Southwestern Region
333 Broadway SE
Albuquerque, NM 87102

Erin Phelps, FWPP Project Manager
1824 S. Thompson St.
Flagstaff, AZ 86001
Submitted via email to: objectionssouthwestern-regional-office@fs.fed.us, ephelps@fs.fed.us

Re: Flagstaff Watershed Protection Project

Dear Mr. Joyner and Ms. Phelps:

This objection to the Flagstaff Watershed Protection Project on the Coconino National Forest is submitted on behalf of Sierra Club's Grand Canyon Chapter and our more than 35,000 members and supporters in Arizona. It is based on our comment letter submitted August 18, 2014.

Sierra Club is one of the oldest grassroots environmental organizations in the country. Sierra Club's mission is "to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments." The Grand Canyon Chapter has long been committed to protection of Arizona's lands, wildlife, water, and communities and has been significantly involved in restoration and protection of our national forests. Our members recreate on the Coconino National Forest, and many reside in the areas affected by this proposal.

The National Environmental Policy Act (NEPA) and the regulations promulgated to implement the act (42 U.S.C. § 4321, et seq., 40 CFR § 1500.1, et seq.) mandate that USDA-Forest Service assess and evaluate the environmental impacts of this project and that reasonable alternatives be considered (42 U.S.C. § 4332 102 C). The Forest Service, as the lead agency for this project, must consider cumulative impacts as well as direct and indirect impacts of the proposal (40 CFR ~ 1508.7).

The Grand Canyon Chapter of the Sierra Club thanks you for incorporating some of our suggestions into the Final Environmental Impact Statement and Draft Record of Decision on the Flagstaff Watershed Projection Project (FWPP). We appreciate the modifications that were made to FWPP, such as reducing the cable-logged area, and additional research the USDA Forest Service conducted, such as site visits to other cable logged locations in Arizona. However, the project still has some significant flaws.

The Grand Canyon Chapter of the Sierra Club objects to the use of cable logging on 414 acres within the Flagstaff Watershed Protection Project. We are concerned about the potential for long-term negative effects on Mexican spotted owl (MSO) habitat; scenery; soils; and increased runoff; and that cable logging will only add a minimal reduction of potential fire severity across the landscape. The Forest Service acknowledges that cable logging will impact Mexican spotted owl habitat and viewshed (Draft Record of Decision, p. 36, 45;), and does not provide adequate reasoning for including it in FWPP.

Alternative 4 would create a forest with 28% of the area exhibiting crown fire potential and 30% exhibiting potential high burn severity (Draft Record of Decision, p. 32). Alternative 4 would be half the price of the action

proposed in the Draft Record of Decision, at $4,079,279 instead of $8,011,548 (Draft Record of Decision, p. 25).

The goal of the project should be to restore a landscape where natural fires will be able to burn. The project seeks to cut the forest back so severely that only 7-8% of the forest will have active crown fire or high soil burn severity potential post-treatment (Draft Record of Decision, p. 32). The project will remove snags from 267 acres of Mexican spotted owl habitat (Draft Record of Decision, p. 34).

Risks of Ecological Harm

A study of California spotted owls found that they preferentially forage in high burn severity areas, especially those with high basal area of snags[1]. Large wildfire does not appear to deter spotted owls from returning to their territories and breeding[2]. There doesn't seem to be an effect of fire on determining local extinction and colonization by California spotted owls, even if the fire burns over 30% of suitable habitat[3]. Total tree basal area is more important than burning in predicting spotted owl presence[4][5]

We object to the use of forest treatment techniques that cost more and can potentially cause ecological harm, when there is an alternative that can achieve the project goals while saving money and avoiding harm. The reductions in fire severity with cable logging are not justified when compared with costs and potential negative impacts. Risks to Mexican spotted owl habitat from cable logging outweigh gains in reduction of fire risk, and the amount of snag reduction is problematic. Also, managed fire in combination with light thinning treatments can achieve desired outcomes in restoring pine forests[6]. We believe that you misinterpret the results of Fulé (2006), who found that thinning small trees from below and returning fire to the landscape can be used to restore forests, when you respond to our comments (Flagstaff Watershed Protection Project Responses to Comments on the Draft EIS, p. 98).

We refer to Mexican spotted owl here because spotted owls have been the subject of a large body of research. The pattern on the landscape that will be created with cable logging, and the noise, impacts, and reduction in canopy closure that will be created by both cable logging and helicopter logging, may negatively impact several species in the area. Dry Lake Hills provide habitat for large carnivores, birds, ungulates, and small mammals, and the entire ecosystem should be considered because the environment is unique in northern Arizona.

Flood hazards

We are concerned that the Forest Service did not attempt to model the temporary increase in runoff that will follow this thinning project, instead choosing to look at a single location and, "rely on observations to predict post-treatment responses." (Flagstaff Watershed Protection Project Responses to Comments on the Draft EIS, p. 101)

We repeat the following comment from our letter dated August 18, 2014:

> "Currently, the Forest Service is only modelling the potential for runoff if a fire occurs with or without thinning treatments, with the predictions that a fire will be less severe if treatments are more aggressive. It is possible to model the temporary increase in runoff after trees are removed, and the

[1] BOND, M. L., LEE, D. E., SIEGEL, R. B. and WARD, J. P. (2009), Habitat Use and Selection by California Spotted Owls in a Postfire Landscape. The Journal of Wildlife Management, 73: 1116–1124. doi: 10.2193/2008-248.

[2] Bond, M.L., R.J. Gutiérrez, A.B. Franklin, W.S. LaHaye, C.A. May, and M.E. Seamans. 2002. Short-term effects of wildfires on spotted owl survival, site fidelity, mate fidelity, and reproductive success. Wildlife Society Bulletin 30:1022-1028.

[3] Lee, D.E., M.L. Bond, and R.B. Siegel. 2012. Dynamics of Breeding-Season Site Occupancy of the California Spotted Owl in Burned Forests. The Condor 114:792-802.

[4] Roberts, S.L., J.W. van Wagtendonk, A.K. Miles, D.A. Kelt. 2011. Effects of fire on spotted owl site occupancy in a late-successional forest. Biological Conservation 144:610-619.

[5] BOND, M. L., LEE, D. E., SIEGEL, R. B. and WARD, J. P. (2009), Habitat Use and Selection by California Spotted Owls in a Postfire Landscape. The Journal of Wildlife Management, 73: 1116–1124. doi: 10.2193/2008-248.

[6] FULÉ, P. Z. and LAUGHLIN, D. C. (2007), Wildland fire effects on forest structure over an altitudinal gradient, Grand Canyon National Park, USA. Journal of Applied Ecology, 44: 136–146. doi: 10.1111/j.1365-2664.2006.01254.x

> Forest Service has been experimenting with this for almost 100 years (Bosch and Hewlett 1982, Zou et al. 2010). Modeling should consider high intensity and repeated storm events, mimicking the conditions during a severe monsoon season. The Forest Service should model the flooding it might cause, before it decides how to implement this project. The effects of increasing flood risk might be temporary, but, if the goal is to reduce flooding, let's make sure the action plan actually does that. Intermediate thinning might achieve these goals better than cable logging." (Sierra Club letter dated August 18, 2014, p. 8)[78]

If the Forest Service really cannot model runoff, how can it predict that it will not increase post-treatment runoff (Flagstaff Watershed Protection Project Responses to Comments on the Draft EIS, p. 101)? Knowing that the effect can be to increase runoff, as we pointed out in our comments on the Draft Environmental Impact Statement (Sierra Club letter dated August 18, 2014), the Forest Service should act in a manner that protects habitat and is mostly likely to meet the demand of the voters, when they elected to fund a project that "To prevent flood damage to the City of Flagstaff ('City'), and to protect the City water supply from damages which occur from large-scale and/or severe wildfire(s) in two watersheds serving the City…" (Proposition 405, which allowed a publicly funded bond for FWPP).

Soil Erosion

Since there is a paucity of peer-reviewed journal articles that have fully analyzed the impacts of steep slope thinning in an arid landscape we think a conservative and proactive approach to minimize soil loss needs to be implemented. At best FWPP is an experiment to thwart the pending catastrophic wildfires within the City of Flagstaff watersheds. Mitigation of debris flows needs to be part of the solution and prevention soil erosion[910].

Scenery and Viewshed

The project shifts the scenic impacts away from urban areas so that those who go into the backcountry seeking to get away from human-dominated landscapes without travelling deep into the wilderness will be the ones most affected. The Forest Service does not demonstrate that scenic values will return within the next several decades because its methods are largely experimental within northern Arizona's environment.

[7] Bosch, J.M. and J.D. Hewlett. 1982. A review of catchment experiments to determine the effect of vegetation changes on water yield and evapotranspiration. Journal of Hydrology 55:3-23.

[8] Zou, C.B., P.F. Ffolliott, and M. Wine. 2010. Streamflow responses to vegetation manipulations along a gradient of precipitation in the Colorado River Basin. Forest Ecology and Management 259:1268-1276.

[9] P.E. Davies, M. Nelson. 1993. The effect of steep slope logging on fine sediment infiltration into the beds of ephemeral and perennial streams of the Dazzler Range, Tasmania, Australia. Journal of Hydrology. 150:4. pp481–504

[10] A. Youngblood. 2010. Thinning and burning in dry coniferous forests of the western United States: effectiveness in altering diameter distributions. For. Sci., 56 (1) (2010), pp. 46–59

Summary

We request the Forest Service remove cable logging from the Flagstaff Watershed Protection Project and retain higher forest density and snags within MSO habitat. The Forest Service should protect the public's investment while ensuring that its actions do not destroy valuable habitat or increase runoff into the City of Flagstaff.

Thank you.

Sincerely,

Alicyn Gitlin
Sierra Club Grand Canyon Chapter